

CLAIMS

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a₅
1. Equipment for detecting that a target has received a direct hit from a simulated weapon including a weapon (10, 30) and a target (11, 12, 38, 45),
- said weapon (10, 30) providing an emitter of signals or laser shots (14, 33) operated by a switch (16, 35) and a trigger (18, 36)
 - 10 - said target including sensors (19, 20, 38a, 41-44) affixed to a supporting element (12, 11, 38, 45),
 - at least said sensors being operatively connected to an electronic detection circuit of a signal or laser shot received by said sensors,
 - 15 - said supporting elements being worn by an user and/or animal,
 - said emitter of signals or laser shots (14, 33) being situated on the barrel of a pistol (10) and/or rifle (30), said equipment comprising a control device or control
 - 20 electronic circuit. (50) characterised in that:
 - said control device is built around an RISC technology microcontroller (56) with the provision of power supply,
 - a direct hit indicator (59), a signaller (60) for indicating whether said weapon is unloaded, and a
 - 25 signaller (58) for detecting the presence of magazines (17, 40) in said weapon are connected to said

microcontroller (56), wherein said microcontroller (56) prevents said weapon from being fired when said indicator (59) is on.

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CLAIMS

1) ~~Equipment for detecting that a target has received a direct hit from a simulated weapon including a weapon (10, 30) and a target (11, 12, 38, 45) and characterised in that said weapon (10,30) provides an emitter of signals or laser shots (14, 33) operated by a switch (16, 35) and a trigger (18, 36), and in that said target includes sensors (19, 20, 38a 41-44) affixed to a supporting element (12, 11, 38, 45), at least said sensors being operatively connected to an electronic detection circuit of a signal or laser shot received by said sensors.~~

2) Equipment according to claim 1, characterised in that ~~said~~ sensors (19, 20, 38a, 41-44) are photovoltaic sensors.

3) Equipment according to claim 1, characterised in that said supporting elements are a jacket (11) and a helmet (12).

~~4) Equipment according to claim 1, characterised in that said supporting elements are a vest (38) worn by the user and/or animal.~~

4/5) Equipment according to claim 1, characterised in that said supporting elements are ^{directly} comprised of a

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target (45).

5 ~~8~~) Equipment according to claim 1, characterised in that said weapon is a pistol (10).

6 ~~7~~) Equipment according to claim 1, characterised in
5 that said weapon is a rifle (30).

~~8) Equipment according to claim 1, characterised in that said emitter of signals or laser shots (14, 33) is situated on the barrel of a pistol (10) and/or rifle (30).~~

10 9) Equipment according to claim 1, characterised in that it envisages a control device or control electronic circuit of said equipment (50) built around an RISC technology microcontroller (56) with
~~the provision of power supply.~~

15 ~~7~~ ¹ ~~10~~) Equipment according to claim ~~8~~, characterised in that in support of said microcontroller (56), for that concerning the processing of a signal detected by said sensors (19, 20, 38a) is provided an amplification and filtering chain to eliminate
20 random components from said signal and make said signal compatible with said microcontroller (56).

8 ~~11~~ ⁷ ~~10~~) Equipment according to claim ~~10~~, characterised in that said chain includes an attenuator circuit (51) fitted upstream an amplifier (54), which is
25 integrated upstream and downstream by high-pass

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filters (52), there also being provided a low-pass filter (53) on a power supply, an output of said amplifier (54) is clipped and made compatible with said microcontroller (56) by a Schmitt trigger (55) which, with a 1% opening of the voltage, there being an additional low-pass filter (53), removes all the possible high frequency components which could interfere with the functioning of said microcontroller 56.

10 ~~11) Equipment according to claim 11, characterised in that to said microcontroller (56) are connected a direct hit indicator (59), a signaller (60) which indicates whether said weapon is unloaded, and a signaller (58) which detects the presence of~~
15 ~~magazines (17, 40) in said weapon.~~

13) Equipment according to claim 12, characterised in that with said magazines (17, 40) disconnected or with said indicator (59) on, said microcontroller (56) prevents the said weapon from
20 ~~being fired.~~

⁹ 14) Equipment according to claim ~~11~~¹, characterised in that to said microcontroller (56) is connected a generator of differentiated sound effects.